--To monitor expression of Oct-4, RT-PCR was carried out on colonies consisting predominantly of stem cells, or colonies which had undergone spontaneous differentiation as described below. mRNA was isolated on magnetic beads (Dynal AS, Oslo) following cell lysis according to the manufacturer's instructions, and solid-phase first strand cDNA synthesis was performed using Superscript II reverse transcriptase (Life Technologies). OCT-4 transcripts were assayed using the following primers: 5'-

B1

CGTTCTCTTTGGAAAGGTGTTC (forward) (SEQ ID NO: 1) and 3'-ACACTCGGACCACGTCTTTC (reverse) (SEQ ID NO: 2). As a control for mRNA quality, betaactin transcripts were assayed using the same RT-PCR and the following primers: 5'-CGCACCACTGGCATTGTCAT-3' (forward) (SEQ ID NO: 3), 5'-TTCTCCTTGATGTCACGCAC-3' (reverse) (SEQ ID NO: 4). Products were analyzed on a 1.5% agarose gel and visualized by ethidium bromide staining.--

Please replace the paragraph beginning at page 32, line 19 with the following paragraph:

--Clusters of cells destined to give rise to neural precursors were identified by their characteristic morphological features in central areas of ES cell colonies 2-3 weeks after

B2

plating. The clusters were dissected mechanically by a micropipette and replated in fresh serum free medium. Within 24 hours they formed spherical structures. The expression of the transcription factor PAX-6 and the intermediate filament nestin by these clusters was demonstrated by RT-PCR as described above. The following primers were used for PAX-6 and nestin respectively: Pax-6 forward primer, 5'AACAGACACAGCCCTCACAAACA3' (SEQ ID NO: 5); Pax-6 reverse primer, 5'CGGGAACTTGAACTGGAACTGAC3'(SEQ ID